SLR-64-07

UNECE R48, Paragraph 6 x 4

Comparison and proposals to open discussion during SLR

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6.x.4.1 Width

- 400mm distance from edges excepted for high beam, reverse, rearfog, daytime running lamp, cornering
- 400mm is for the width of the vehicle, understandable
- No proposal for modification

DRL

DRL

High beam

6.x.4.1 Distance between left/right lamp

- 600mm apply only for :
  - front/rear position lamp other than M1, N1
  - Low beam other than M1, N1
  - Stop (S1, S2) other than M1, N1
  - DRL
- **Proposal to investigate the possibility to:**
  - **remove this 600mm distance for front/rear Position lamps and low beam for vehicle other than M1, N1**
  - **remove the 600mm distance between left/right DRL (like possible in FMVSS108 and in new GB xxx LSD draft (A2 front position lamp))**

DRL + auxiliary lamp allowed in USA if it does not impair legal lamp function

Rivian R1T

Ford F150 Lightining

Current solution in Europe

- To have DRL + Front PL
  - No 600mm rule for front PL
  - 600mm rule for DRL
- Not same luminance between DRL and PL

New proposal in China

- GB xxx LSD draft
- Entry in force July 2024 tbc
- Possibility to have a variable intensity front PL instead of a DRL

3.4.3

Category A2

Front position lamp with variable light intensity installed on the front of the vehicle.

7.3 Category A2 front position lamp requirements

7.3.1 It shall not be equipped with the daytime running lamp at the same time.

7.3.2 When the passing beam is activated or the ambient light is less than 1,000 lx, the optical performance shall meet the photometric requirements of Category A1 front position lamp in Table 3.

7.2 Luminous intensity limit requirements

7.2.1 The luminous intensity on the reference axis shall meet the requirements of Table 3.

Table 3 Luminous intensity on the reference axis

Unit: Candela

Function		Minimum luminous intensity	Maximum luminous intensity	
			Single lamp (excluding lamp marked "D")	Single lamp (excluding lamp marked "D")
Front position lamp and front end-outline marker lamp	A1 stable intensity	4	140	70
	A2 variable intensity	4	1200	600

6.x.4.2 Height

- Low beam height : 500-1200mm
- No proposal for modification, risk of glare is known

6.x.4.2 Height

- Foglamp : maximum height 800mm
- Cornering : maximum height 900mm
- Due to height constraint, some OEM are defining a static bending light (T-signal) part of the low beam and/or AFS if the lamp installation is higher than 900mm

- No proposal for modification
  - Cornering is not required to be aimed today
  - If alignment with low beam height, risk of glare
  - Same approach for foglamp

- **Alternative proposal : to align Cornering speed activation (maximum 40 kmh) to 50 kmh like town light**

6.x.4.2 Height

- DRL : 250-1500mm
- PL : 250-1500mm
- Stop : 350-1500mm
- Turn indicator : 350-1500mm
- Reverse : 250-1200mm (no requirement in FMVSS)
- Rear fog : 250-1000mm, 250-1200mm if grouped (no requirement in FM
- Parking lamp : 350-1500mm
- Rear reflex : 250-900mm, 250-1000 if grouped (*FMVSS 1524mm max*).

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- **Proposal 1 : to align all signaling function to 250-1500m (1500mm already possible for reflex in 6.14/15/16/17.4.2)** *
  (reflex efficiency could be lower at heigher height due to low beam maximum height 1,2m)

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- **Proposal 2 : to increase maximum height to 2100mm (a lot of SUV height) (*FMVSS maximum height for optical center = 1889mm* + already possible in 6.10.4.2)**
- If modification, need to double check some visibility angles and performances (new light distribution to investigation), especially for bright lamp (be careful of glare)

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- **Proposal 3 : At mimimun, aligning PL and parking lamp (error when PL height has been modified from 350 to 250mm) and rearfog and reflex when grouped or not ground (difficult to understand the rationale behind the difference)**

6.x.4.3 lenght

- No special improvement for step1.